REMARKS

Without prejudice, Applicants are supplementing the amendment made on December 20, 2004 to clarify the claims and more accurately set forth the subject matter of the invention. Specifically, the independent claims have been amended to emphasize that each reflective element is capable of being positioned in one or more intermediate positions (as recited in previously presented claim 35), and to deemphasized the subject matter directed to the z delta range which is recited, instead, in new dependant claims 37 and 38. Claim 39 has been added to recite that the reflective elements can be positioned in any intermediate position between the first and second positions as opposed to having a set number of predetermined intermediate positions. Claim 34 has been amended to recite that the reflective elements in one embodiment are capable of being rotated to intermediate positions about two axes. Claims 33 and 35 have been cancelled. Support for these amendments can be found in former claim 35 and throughout the application, specifically on page 11 lines 17 through 29. In addition to these amendments, the applicants have amended the claims to improve consistency and clarity. No new matter has been added.

Applicants submit that this clarification to the claims underscores an important difference between the claimed invention and the disclosure of Moon (US Patent Application No. 2002/0176151 A1), and is consistent with the arguments previously submitted on December 20, 2004, which are hereby incorporated into this supplemental reply. Specifically, unlike Moon, which discloses an optical device in which the reflective elements must be in one of only two positions, here, the reflective surfaces can be rotated to a number of intermediate positions. This feature is significant and provides for a number of important benefits including (1) ease of assembly, (2) scalability, and (3) subchannel granularity.

Regarding ease of assembly, since the reflective elements of the optical device of the claimed invention can be rotated to intermediate positions, they can be allocated to particular channels *after* the array is fixed in place within the optical device. This is significant as it facilitates passive alignment of the array rather than active alignment. It is well known that active alignment is a time consuming and expensive. Unlike the device of the claimed invention, the Moon device comprises an array that must be actively aligned. Specifically,

since the reflective elements in the Moon device have no intermediate positions, the array must be situated in the device such that the reflective elements are optically aligned in one of their two positions. This requires active alignment. Therefore, the device of the claimed invention and its method of manufacture (as recited in claim 28) are patentably distinct over the disclosure of Moon.

Regarding scalability, since the reflective elements of the optical device of the claimed invention can be rotated to intermediate positions, they are not specific to particular channel wavelengths. In other words, the reflective elements can be rotated to any number of intermediate positions to switch channels of varying wavelength to different ports. Accordingly, the reflective elements may be allocated to any channel position or bandwidth, thereby allowing the device to be configured to support multiple rates and formats after assembly and installation. Since the Moon device is fixed with respect to reflective element positions, it cannot accommodate changes in signal rates and formats after installation. Therefore, the device of the claimed invention and its method of being configured for a particular channel beam after assembly (claim 30) are patentably distinct over the disclosure of Moon.

Regarding subchannel granularity, since there are a plurality of reflective elements which correspond to a given channel, and since each element can be positioned in one of any number of intermediate positions to attenuate--to any degree--a portion of the signal, the device of the claimed invention may be configured to effect wavelength dependant attenuation and wavelength dependant group delay. In other words, each reflective element reflects just a portion of a given channel, allowing that portion of the channel to be controlled independently of the channel as a whole. This allows portions of the channel signal to be tuned. For example, individual reflective elements may be positioned in different intermediate positions to produce arbitrary amplitude or group delay profiles either within a single wavelength channel or across the supported wavelength band. The device of Moon is not capable of such tuning. Rather, since the reflective elements of Moon must be in one of two positions, they either fully attenuate or fully couple a portion of a channel beam to a particular port. There are no degrees of attenuation. Therefore, the device of the claimed

invention and its method of intrachannel configurability (claim 32) are patentably distinct over the disclosure of Moon.

In light of the above-remarks and early and favorable response is earnestly solicited.

Thank you.

Respectfully submitted,

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